

# Work Order ID 82331

\*82331\*

March-28-12 4:04:16 PM

Page 1

Item ID: D4406-043

Accept

\*N9000040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Aft Wearplate Assembly

Start Date: 28/03/2012 Start Qty: 8.00

\*8\*

Cust Item ID:

Required Date: 11/04/2012 Req'd Qty: 8.00

\*8\*

Customer:

Reference:

Approvals:

Process Plan: MLJ

Date: 12/03/29

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D4406

B

100

\*100\*

Waterjet

FLOW CNC Waterjet

304 - 0.050

Memo

1-Cut as per dwg D4406-3

prog rev: B

dwg rev: B

2-Deburr if required

110

QC2- Inspect parts off machine FAI/FAIB

\*110\*

QC

Quality Control

Memo

0.00

0.00

B12-4-7

Jm 120405

B12-4-7

Jm 120405

SCRAP

# WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 82331

**\*82331\***

Page 2

March-28-12 4:04:16 PM

Item ID: D4406-043

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Aft Wearplate Assembly

Start Date: 28/03/2012 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 11/04/2012 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC8- Inspect parts - second check

0.00

**\*120\***

QC

Memo

0.00

Quality Control

130

0.00

**\*130\***

Small Fab

Memo

0.00

Small Fab

Form as per dwg D4406

140

QC5- Inspect part completeness to step on W/O

0.00

**\*140\***

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 82331****\*82331\***

Page 3

March-28-12 4:04:16 PM

Item ID: D4406-043 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Aft Wearplate Assembly  
Start Date: 28/03/2012 Start Qty: 8.00 **\*8\*** Cust Item ID:  
Required Date: 11/04/2012 Req'd Qty: 8.00 **\*8\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150		0.00							
<b>*150*</b>									
Large Fab	Memo	0.00							
Large Fab	Weld bar as per dwg A/R 2059b hardcoat Batch#: _____								
	Weld bar to wearplate as per dwg A/R s.s. rod Batch #: _____								
160	QC10- Inspect visual per QSI004- ground welds	0.00							
<b>*160*</b>									
QC	Memo	0.00							
Quality Control									
170		0.00							
<b>*170*</b>									
Small Fab	Memo	0.00							
Small Fab	Apply coating as per dwg D4406								

7/10 →

W/O: 62331		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D4406-043 PAR #: \_\_\_\_\_ Fault Category: Design NCR: Yes No DQA: Not Date: 12/11/24  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: CK Date: 11

NCR: 12-2043		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
21/1/24	#	Scrap + Destroy. cannot under R-C Design Flow	<i>[Signature]</i> 11/1/24	Scrap + Destroy no Replz				<i>[Signature]</i> 12/1/24

$\$648.69 \times 8 =$   
 $\$5189.52$

NOTE: Date & initial all entries

**Work Order ID 82331****\*82331\***

Page 4

March-28-12 4:04:16 PM

Item ID: D4406-043

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Aft Wearplate Assembly

Start Date: 28/03/2012 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 11/04/2012 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC5- Inspect part completeness to step on W/O	0.00							
<b>*180*</b>									
QC	Memo	0.00							
Quality Control									
190	Identify as per dwg & Stock Location: _____	0.00							
<b>*190*</b>									
Packaging	Memo	0.00							
Packaging									
200	QC21- Final Inspection - Work Order Release	0.00							
<b>*200*</b>									
QC	Memo	0.00							
Quality Control									

w 12.11.14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

March-28-12 4:04:19 PM

Page 1

Work Order ID: 82331

**\*82331\***

Parent Item: D4406-043

**\*D4406-043\***

Parent Item Name: Aft Wearplate Assembly

Start Date: 28/03/2012

Required Date: 11/04/2012

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP Rev A 11.06.06new issue EC verified by:DD  
12.02.06 as per dwg revPB1 DD verf:EC

IPP rev B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S18GA		Purchased	No			100	sf	277.7860	2.92	24.58947			

**\*M304S18GA\***

304/316 .050 Sheet

\*\*

B12-4-7

Location	Loc Qty	Loc Code
MAT020	181.786	
119032	2.3	
119383	59.486	
120604	120	
MAT20	96	
121192	96	

(8)

JM  
120405

121192  
121192

D4407-3

Manufactured No

150

Each

4.0000

2

16

**\*D4407-3\***

Bar

\*\*

Location	Loc Qty	Loc Code
ENG	-10	
WA	14	
80796	4	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	82331
<b>Description: Plate</b>		<b>Part Number:</b>	D4406-3
<b>Inspection Dwg: D4406 Rev: B</b>		<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.561	+/-0.010	0.559	✓		Vern	HB-02
0.30	+/-0.030	0.300	✓		vern	HB-02
0.88	+/-0.030	0.878	✓		vern	HB-02
0.13	+/-0.030	0.125	✓		vern	HB-02
0.31	+/-0.030	0.326	✓		vern	HB-02
24.995	+/-0.010	24.995	✓		MT	HB-01
47.958	+/-0.010	47.958	✓		MT	HB-01
54.178	+/-0.010	54.178	✓		MT	HB-01
2.43	+/-0.030	2.438	✓		vern	HB-02
7.77	+/-0.030	7.774	✓		vern	HB-02
7.203	+/-0.010	7.196	✓		vern	HB-02
3.63	+/-0.030	3.634	✓		vern	HB-02
4.00	+/-0.030	4.013	✓		vern	HB-02
7.071	+/-0.010	7.063	✓		vern	HB-02
7.800	+/-0.010	7.808	✓		vern	HB-02
0.050	+/-0.010	0.048	✓		vern	HB-02

<b>Measured by:</b>	RB / JM	<b>Audited by:</b>	8	<b>Preliminary Approval:</b>	
<b>Date:</b>	12/04/05	<b>Date:</b>	12/04/09	<b>Date:</b>	

Rev	Date	Change	Revised by	Approved
A	11.10.13	New Issue P/O D4406-043	KJ	
B	12.03.08	Dimensions revised per Dwg Rev B	KJ	

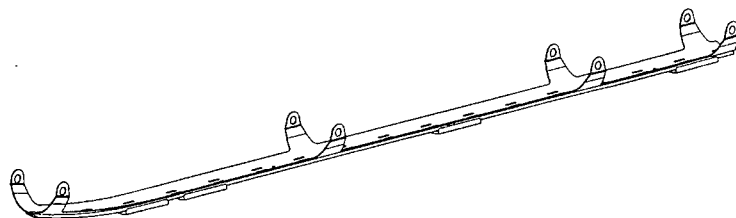
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

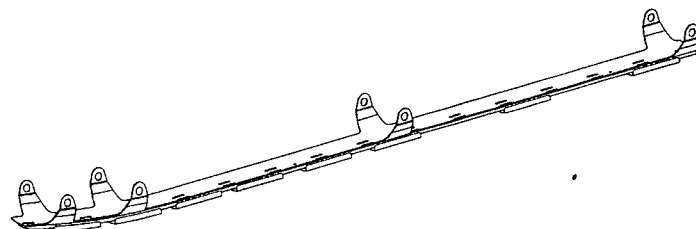
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D4406-041 FWD WEARPLATE ASSY**



**D4406-043 AFT WEARPLATE ASSY**

ITEM	QTY -041	QTY -043	P/N	DESCRIPTION
1	X		D4406-041	FWD WEARPLATE ASSY
2		X	D4406-043	AFT WEARPLATE ASSY
3	1		D4406-1	PLATE
4		1	D4406-3	PLATE
5	2		D4407-1	BAR
6		2	D4407-3	BAR
7	A/R	A/R	2059B	HARDCOAT
8	A/R	A/R	4714	PLUS ONE ROCKGUARD (SEE NOTE 10, SHT 2 & 3)

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

WITHOUT NOTICE  
WORK ORDER

NO. 82331 MLJ  
12/03/29

RELEASE  
2012-02-23  
MP

B	REVISE BILL OF MATERIAL; ADD NOTE 13/14 & REVISE NOTE 9 SHT 2 & 3; MODIFY DETAIL E & F (ZN B3-6, C2-6); ADD DETAIL G (ZN C7-6); REVISE D4406-3F TAB LOCATIONS (ZN B5-5)	RF	12.02.16
A	NEW ISSUE	RF	11.08.15
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D4406	SHEET 1 OF 6
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSY	NTS
DATE	12.02.16	<small>COPYRIGHT © 2011 BY DART AEROSPACE LTD  THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

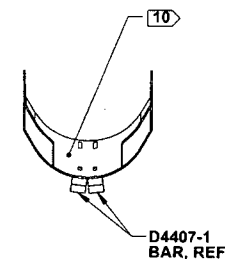
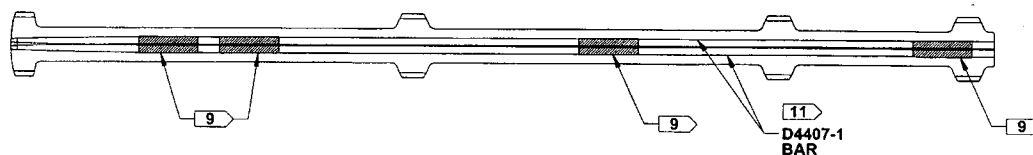
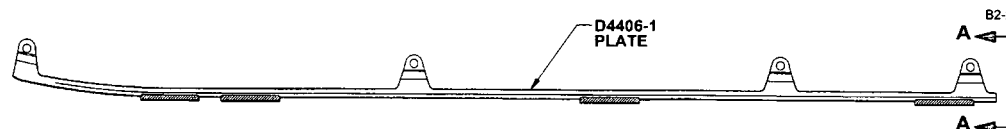
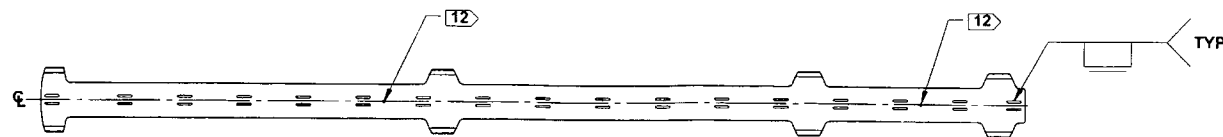
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# **D4406-041 FWD WEARPLATE ASSY**

**SECTION A-A** C3-2  
SCALE 2X

**RELEASED**  
2012-02-23  
MP

## **NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 8.40 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.37 THICK x 0.50 WIDE, FLUSH WITH D4407-1 BAR ON LATERAL SURFACES
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF PLUS ONE ROCKGUARD 4714, 0.020-0.040 THICK
- 11) FORM TO MATCH PROFILE OF D4406-1 AT TIME OF WELDING
- 12) TRANSFER  $\varnothing 0.188$  HOLES FROM D4406-1 TO D4407-1
- 13) NOTCH D4407-1 BARS AS REQUIRED TO FORM TO D4406-1 PLATE

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO. <b>D4406</b>	REV. B
MFG. APPR.	RF	SHEET 2 OF 6	
APPROVED	RF	TITLE <b>WEARPLATE ASSY</b>	SCALE NTS
DE APPR.	RF	<small>COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	
DATE	12.02.16		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

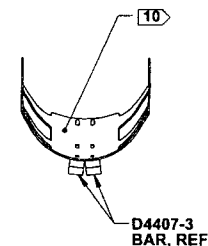
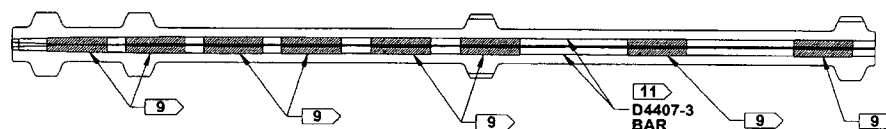
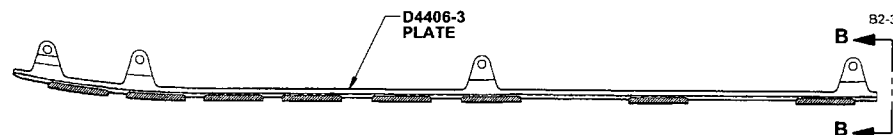
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





82331



# **D4406-043 AFT WEARPLATE ASSY**

**SECTION B-B** C3-3  
SCALE 2X

**RELEASED**  
2012-02-23

## **NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 8.73 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.37 THICK x 0.50 WIDE, FLUSH WITH D4407-3 BAR ON LATERAL SURFACES
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF PLUS ONE ROCKGUARD 4714, 0.020-0.040 THICK
- 11) FORM TO MATCH PROFILE OF D4406-3 AT TIME OF WELDING
- 12) FILL TOOLING HOLE WITH WELD ONE PLACE ONLY
- 13) TRANSFER  $\varnothing 0.188$  HOLES FROM D4406-3 TO D4407-3
- 14) NOTCH D4407-3 BARS AS REQUIRED TO FORM TO D4406-3 PLATE

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4406	SHEET 3 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSY	NTS
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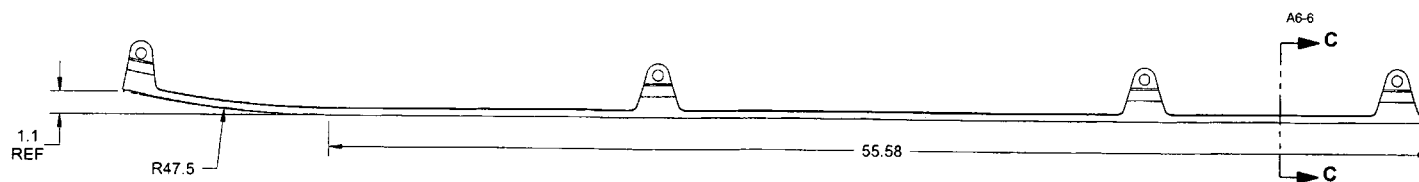
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

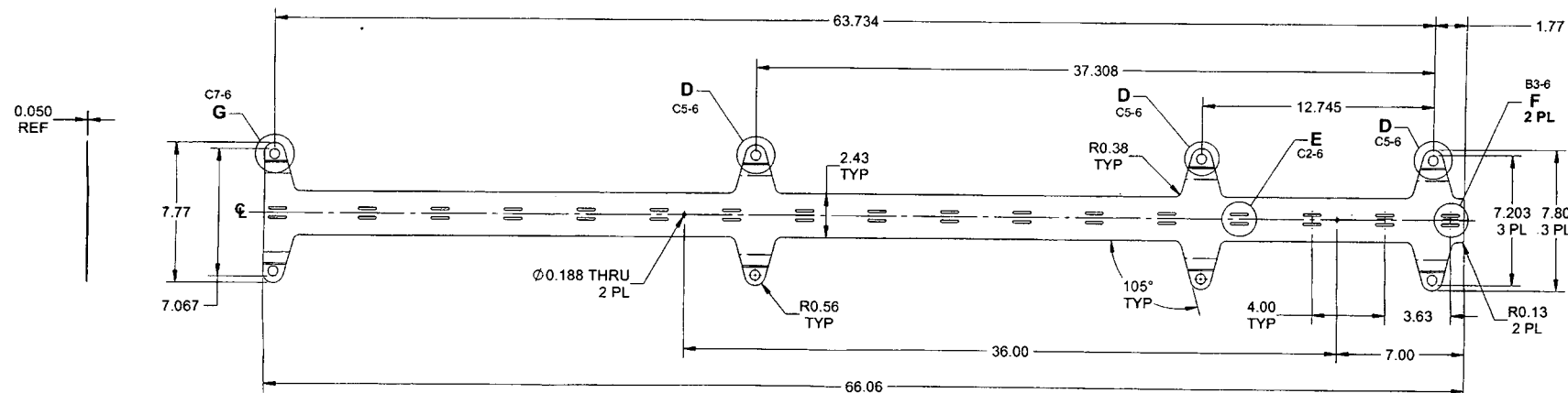
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D4406-1 PLATE**  
(MAKE FROM D4406-1F)



**D4406-1F FLAT PATTERN**

**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 0.050 THICK (18 GAUGE)  
PER AMS 5513 OR 5524  
OR ASTM A240 OR ASME SA240  
REF. DART SPEC. M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.7 lbs

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	<b>D4406</b>	SHEET 4 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>WEARPLATE ASSY</b>	NTS
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**RELEASED**  
R 2012-02-23  
MP

82331

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

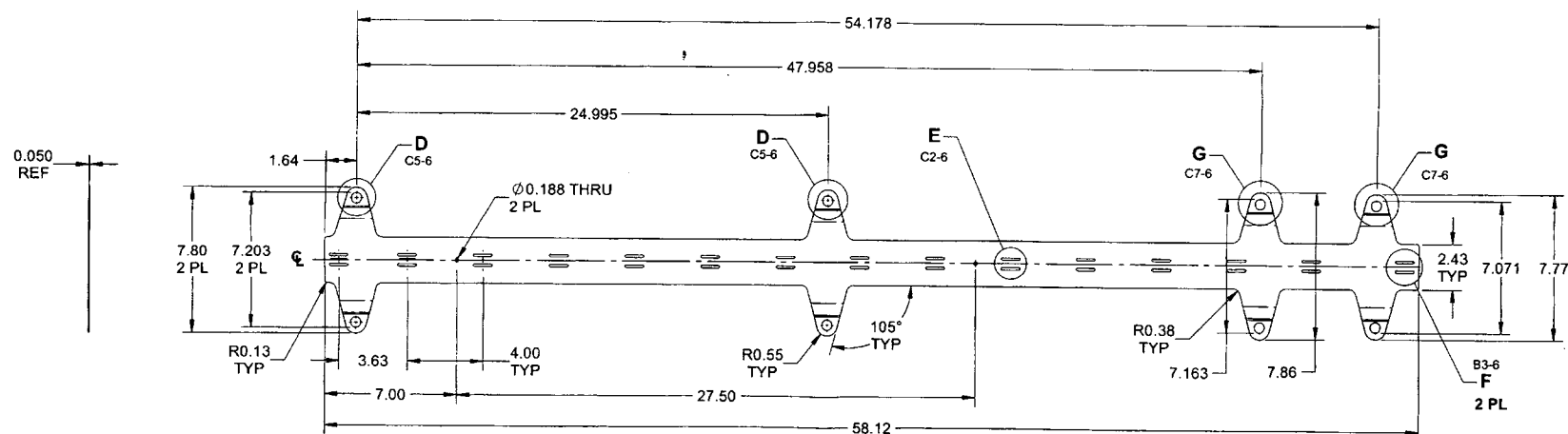
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**D4406-3 PLATE**  
(MAKE FROM D4406-3F)



**D4406-3F FLAT PATTERN**

RELEASED  
2012-02-23

NOTES:

1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 0.050 THICK (18 GAUGE)  
PER AMS 5513 OR 5524  
OR ASTM A240 OR ASME SA240  
REF. DART SPEC. M304S18GA

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: 2.4 lbs

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4406	SHEET 5 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSY	NTS
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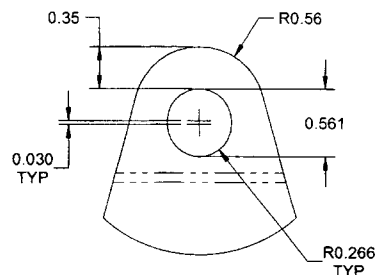
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

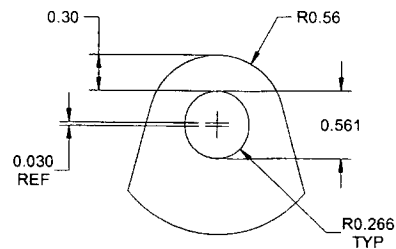
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



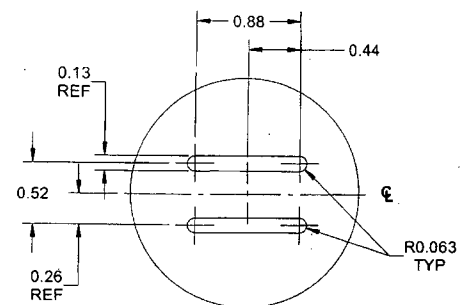
**DETAIL G**  
SLOT DETAIL TYP  
SCALE 6X

C7-4  
C2-5  
C3-5



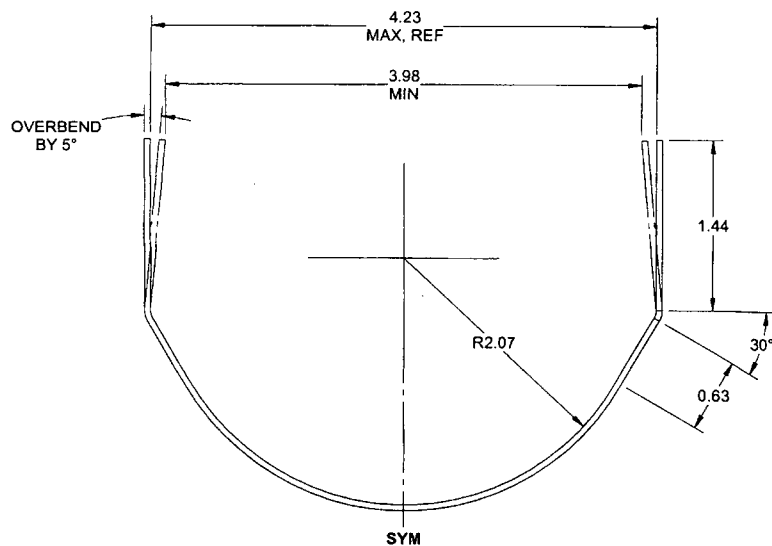
**DETAIL D**  
SLOT DETAIL TYP  
SCALE 6X

C2-4  
C3-4  
C5-4  
C5-5  
C6-5



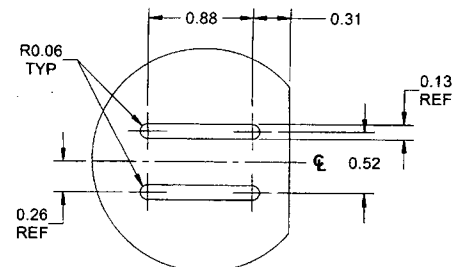
**DETAIL E**  
SLOT DETAIL TYP  
SCALE 6X

C2-4  
C4-5



**DETAIL C**  
DETAIL TYP  
SCALE 6X

D2-4  
D6-5



**DETAIL F**  
SLOT DETAIL TYP  
SCALE 6X

C1-4  
B1-5

**RELEASED**  
2012-02-23  
WTP

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO. <b>D4406</b>	REV. B
MFG. APPR.	<i>[Signature]</i>	SHEET 6 OF 6	
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>WEARPLATE ASSY</b>	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action, Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Work Order NCR

Printed on: Tuesday, November 13, 2012

<b>Details</b>			
<b>Raised Date</b> 11/13/2012	<b>Status</b> Open	<b>Owner</b> El Kassis, Isam	<b>Number</b> NCR12-2031
<b>Target Date</b> 11/30/2012	<b>Standard</b>		<b>Severity</b> MAJOR
<b>Source</b> Employee Suggestion		<b>Audit</b>	
<b>Raised By Person</b> Downing, Eric	<b>Raised Against (Department or Supplier)</b> Engineering\Design		<b>Fault Category</b> General\Design
<b>Details</b> Found when welding the D4407-1 &-3 bars that the hard facing and carbide would cause it to snap and would break all the welding off. was brought to the attention of QC by DOO due to faulty design and major cost of failure on W/O 82331 D4406-043			
<b>Product</b> D205-634\D4407-3			
<b>Document</b>		<b>Root Cause</b>	
<b>Closed By</b>	<b>Closed Date</b>	<b>Resolution</b>	

<b>Corrective Action</b>			
<b>Target Date</b> 11/30/2012	<b>Owner</b> El Kassis, Isam	<b>Closed Date</b>	<b>Closed By</b>
<b>Details</b>			

<b>Actions</b>			
<b>Number</b>	<b>Owner</b>	<b>Target Date</b>	<b>Completed Date</b>
<b>Details</b>		<b>Response</b>	
3	Lacelle, Linda	11/16/2012	
stop all production on D4406-041 &-043 due to faulty desgin			
4	Petsche, Mike	11/23/2012	
create a PAR to redesain all D4406-1, D4406-3 and D4407-1, D4407-3			